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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/352,422	07/12/1999	EIJI IWATA	09792909-4938	2228

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EXAMINER

VO, TUNG T

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 01/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/352,422

Applicant(s)

IWATA, EIJI

Examiner

Tung T. Vo

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Response to Arguments

1. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (US 5,675,331) in view of Fujiwara et al. (US 5,689,254) and Allen et al. (US 5,583,500).

Watanabe further teaches the decoder (4-6 of fig. 1) in the figures 3-5 to perform the variable and the fixed decoding of MPEG stream as set forth in the previous Office Action, Paper No. 16 and 19. Where Watanabe teaches the operations in the decoders (4-6 of fig. 1) obviously comprise an inverse quantizing means (IQ/IDCT, X5) for performing inverse quantization and an inverse transform means (X5) for performing a predetermined transform processes through the coefficients of DCT; an image generating means (col. 15, lines 36-37), a motion compensation processing means (X6) for carrying out motion compensation processing based on at least one of the inverse transformed data blocks and the image data block to generate the reference image (col. 15, lines 4-45). Furthermore, Watanabe teaches the data blocks are

macro-blocks (fig. 12), and the transform means is a discrete cosine transformation (DCT) that performs DCT coefficients (col. 15, lines 9-10).

It is noted that Watanabe does not particularly teach decoding process performs of waiting for the end of variable length coding/decoding of a data block, end of block (EOB), when the length coding/decoding of a previous block would not yet complete as specified in claims 1, 7, 10, and 17.

However, Fujiwara decoding process performs of waiting for the end of variable length coding/decoding of a data block, end of block (EOB), when the length coding/decoding of a previous block would not yet complete (col. 8, lines 27-36).

Taking the combined teachings of Watanabe and Fujiwara as a whole, it would have been obvious to one skill in the art to implement the teachings (col. 8, lines 27-36) of Fujiwara into the decoder of Watanabe for decoding the end of variable length coding/decoding of a data block. Doing so would achieve in real time highly decoding efficient run-length decoding responsive to a picture element clock signal of high frequency as suggested by Fujiwara (col. 10, lines 29-31).

It is noted that Watanabe further teaches the decoders (4-6) for decoding the variable and the fixed length codes, wherein the encoded data blocks are encoded by the variable and the fixed length coders as suggested by Watanabe (col. 5, lines 48-50, 59-60).

Moreover, In Watanabe, the decoders obviously decode the MPEG stream, so it is well recognized in the art that the MPEG stream is an encoded data, and wherein the data is encoded by an encoder or encoding process, which is a reversible of the decoding process; the encoder

Art Unit: 2613

serves to provide DCT, Quantization, Motion Compensation complying the MPEG standard as suggested by Watanabe (col. 4, lines 6-15). Therefore, it would have been obvious to one of ordinary skill in the art to use the suggestion of Watanabe for constructing the encoders in the same arrangement as claimed for encoding a input signal in parallel of the variable and the fixed length codes of a data block to provided a quality encoded image to the decoders. Doing so would implement the encoder which allows the processing of the next code to be changed in accordance with a code by adopting a simple and reasonable circuit configuration where codes to be encoded comprise variable length codes mixed with fixed length codes, and possible to reduce size of the circuit.

It is further noted that the combination of Watanabe and Fujiwara suggests the encoders obviously used to encode the data block above but it does not to particularly teaches the encoders for encoding a data block in both variable and fixed length encoding as specified in claims 1 and 7. However, Allen teaches a method and apparatus for variable and fixed length of encoding and decoding data in parallel (figs. 2A and 18), so the encoders (fig. 18) for encoding the fixed and variable data signals complying a MPEG and/or JPEG standard.

Taking the combined teachings of Watanabe, Fujiwara and Allen as a whole, it would have been obvious to one of ordinary skill in the art to modify the encoders (fig. 18) of Allen into the combination of Watanabe and Fujiwara to advantageously accommodate high bandwidth and obtain more effective bandwidths out of moderately fast channel lien ISDN, CD-ROM, and SCSI.

Conclusion


1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See the previous Office Action, Paper No. 11.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung T. Vo whose telephone number is (703) 308-5874. The examiner can normally be reached on 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris. Kelley can be reached on (703) 305-4856. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.


TUNG T. VO
PATENT EXAMINER
T. Vo
January 14, 2003

Tung T. Vo
Examiner
Art Unit 2613